

**Differentiating Between Developmentally Disabled Child Molesters
and Perpetrators of Adult Sexual Molestation
Using Penile Plethysmography**

A Thesis

Submitted to the Faculty

of

Drexel University

by

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in partial fulfillment of the
requirements for the degree

of

Doctor of Philosophy

August 2004

Acknowledgements

I would like to thank Dr. Christine Nezu and Dr. Art Nezu for their direction, assistance, and guidance. In particular, Dr. Christine Nezu's recommendations and suggestions, in addition to support, have been invaluable for the project.

I also wish to thank Dr. Peter Byrne, without whose help, I would not have been able to complete this project. Thanks are also due to Dr. Susie Chung and Dr. Paul Spangler. Each has contributed significantly to this project by providing guidance and essential feedback. Additionally, Elizabeth Freeman provided a tremendous amount of support and resources.

Finally, special thanks should be given to my husband who helped me in so many ways. Words alone cannot express the thanks I owe Brian for his encouragement and assistance throughout the years.

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Abstract

Comparison of Plethysmographic Data of Developmentally Disabled Offenders
Against Adults and Children

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The purpose of this research project was to examine whether differences exist in persons with developmental disabilities who have committed either an offense against a child or an offense against an adult. Research with non-developmentally disabled offenders indicates differences exist, which has treatment implications. However, due to the low victim specificity of developmentally disabled sex offenders, it is hypothesized that no differences will be found. An ANOVA was conducted to examine whether differences existed with respect to the Pedophile Index and no significant differences were found. A split plot repeated measures ANOVA was performed and differences were found to exist with respect to age and gender between the two groups. However, the differences found with respect to age appear to be moderated by gender. Post-hoc analyses found no correlation between the Pedophile Index scores and measures of recidivism, which consider gender of the victim. Differences were noted between the two groups of offenders with respect to measures of recidivism.

CHAPTER 1: INTRODUCTION

Developmental disabilities and sexual offending

In a recent study (Prentky & Burgess, 2000), victim and offender-related treatment and incarceration costs per each re-offense of child molesters totaled approximately \$180,000. This total does not include perpetrators against adult women. Consequently, it is apparent the costs imply the extreme importance in understanding, treating, and preventing sexually aggressive behavior. Research on sex offenders has increased dramatically in the last two decades. However, research on developmentally disabled sex offenders is a relatively new area of research that is in need of further exploration.

Sexual deviation among persons with developmental disabilities still remains poorly understood. Studies on the incidence of sexual offending among adults with developmental disabilities have varied considerably. Although initially it was believed that sex offenses were extremely prevalent among individuals with developmental disabilities, later research has not supported this claim (Murphy, Coleman, & Abel, 1983). For example, Day (1994) reports the overall level of offending is lower in the developmentally disabled population; however, sexual offenses among the developmentally disabled tend to be over-represented. Additionally, Murphy, Coleman, and Abel (1983) report extremely high rates of sexual offending among the developmentally disabled population in earlier studies, but remind us that this data was unsupported in later research. According to Criminal Statistics of 1988, of the offenders found guilty or cautioned for indictable sex offenses, mentally retarded individuals

accounted for 5 % of the general population who committed heterosexual rape, 37%, of the general population who committed heterosexual indecent assault, 2% of the general population who committed heterosexual incest, 14% of the general population who committed homosexual gross indecency, 3% of the general population who committed indecent assault with a male under 16 years, and 7% of the general population who committed indecent assault. Thus, the conclusion has been made that the data do not suggest an over-representation of persons with developmental disabilities in the sexual offender population. Furthermore, experimental literature has found an average of 2% of inmates are mentally retarded (Denkowski & Denkowski, 1985). This is less than the level found in society, yet it constitutes incarceration for all types of crimes, not just sexual offenses. Unfortunately, this number is considered questionable when one considers the lack of clear guidelines for estimating IQ from facility to facility and variations in IQ levels indicative of mental retardation (Day, 1993). Additionally, there is also a percentage of the population that is never convicted who receive diversion from incarceration. Santamour and West (1982) have found that there is no estimate of developmentally disabled offenders who have been diverted from the criminal justice system; however, they found evidence that developmentally disabled offenders are diverted less frequently than non-disabled offenders. Furthermore, they reported developmentally disabled offenders are more likely to be convicted of the original charge, more likely to enter a plea of guilty, less likely to make an appeal, and tend to serve longer sentences than non-disabled offenders.

It was not until the early 1990's that serious attention began to be paid to the risk of men with developmental disabilities who sexually abuse (Thompson, 2000). Day

(1994) reports the overall offense pattern of the developmentally disabled sex offender is similar to the non-developmentally disabled sex offender: both are characterized by sexual naiveté, poor impulse control, and lack of relationship skills. Developmentally disabled sexual offenders possess cognitive distortions similar to non-developmentally disabled offenders although their beliefs may not be as sophisticated (Haaven & Schlank, 2001). Furthermore, Haaven and Schlank (2001) report both populations of sexual offenders have deviant arousal. In contrast, developmentally disabled offenders are less likely to commit serious offenses and more likely to engage in minor or nuisance offenses. Moreover, developmentally disabled offenders have a low specificity for age and gender of the victim and offense type, suggesting circumstance and opportunity rather than sexual preference or orientation are overriding factors in the choice of victim or type of offense (Day, 1994).

Hayes (1991) reported developmentally disabled sex offenders typically have confused self-concepts, poor peer relations, a lack of sexual and sociosexual knowledge, negative early sexual experience, a lack of personal power, and greater social skills deficits. Similar to Day (1994), Hayes (1991) reported developmentally disabled offenders tend to be less discriminating in their choice of victim, choosing both male and female, adult and child, older and younger, and more often, an unknown victim.

Etiology of Sexual Offending

Many researchers have struggled to develop a comprehensive theory regarding the development and maintenance of sexual offending behavior. Specifically, Marshall and colleagues (1999) have examined the influence of specific factors such as sexual arousal,

conditioning, attachments, intimacy, empathy, cognitions, and self-esteem and their relationships with sexual offending behavior. The interaction of these factors is called as vulnerability. Vulnerability is defined as the potential to engage in sexually inappropriate behavior. Thus, the potential degree of vulnerability or resilience (at the opposite end of the continuum from vulnerability) is the result of an individual's interactions throughout childhood. It is the level of vulnerability or resilience which makes an individual more or less likely to engage in sexually inappropriate behavior. Fortunately, vulnerability is a dynamic factor which can be changed or reversed. Vulnerability in combination with certain situational factors, such as alcohol intoxication and anger, can lead to sexual offending.

The literature concerning the development and maintenance of sexual offending behavior in persons with developmental disabilities breaks down and separates the concept of vulnerability into two specific etiologic factors: inappropriate arousal to deviant stimuli and deficits in social competence. Deviance refers to excessive sexual arousal toward an inappropriate stimulus or method of sexual expression (Hayes, 1991). Additionally, when assessing for the presence of inappropriate arousal to deviant stimuli, assessment must consider lack arousal to appropriate stimuli (Murphy, Coleman, and Haynes, 1983). According to the sexual preference hypothesis, sexual offending is driven by sexual desires (Marshall, 1996). Therefore, if the sexual desire is deviant, sexual offending is more likely to occur. In examining the literature on the sexual desires of persons with developmental disabilities, there are two commonly held beliefs: developmentally disabled persons are seen as hypersexual or having uncontrollable sexual desires, or they are viewed as innocent and naïve persons who have no sexual

desires (Szollos & McCabe, 1995; Williams, 1991; Zucker-Weiss, 1994). As such, this concept of persons with developmental disabilities having uncontrollable sexual desire would appear to be pertinent to problems of sexual offending behavior. In contrast to the sexual preference hypothesis, it is unknown whether a high level of arousal is critical for committing a sexual offense due to the similarities noted with rapists' and non-rapists' overall pattern of physiological sexual arousal (Hall & Hirschman, 1991).

Deficits in social competence can refer to a variety of areas within which an individual's skills are insufficient as compared to the non-developmentally disabled population, most prominent, interpersonal skills. Murphy, Coleman, and Haynes (1983) found developmentally disabled sex offenders have similar deficits in social skills as non-developmentally disabled sex offenders. Furthermore, developmentally disabled sex offenders are equally, if not more, deficient with respect to social skills. Various models have been proposed to account for the deficits in social competence. One such model has been developed by Murphy, Coleman, and Abel (1983). They propose a model of sexual deviation in terms of excesses and deficits:

1. excess in deviant arousal or deficit in nondeviant arousal (measured by plethysmograph, although relatively unexplored), and
2. social skills deficits including heterosocial skills, assertiveness skills, empathy skills, and gender-motor skills (i.e. social competence) and sexual knowledge.

Griffiths and colleagues (1985) propose that reasons for inappropriate sexual behaviors are the same for intellectually and non-intellectually disabled populations.

These reasons include:

1. arousal towards an inappropriate sex object or method of sexual expression,
2. deficits in social skills and assertiveness,
3. lack of appropriate sexual knowledge, and
4. a pattern of cognitive distortion.

Similarly, Aadland, Afwerke, and Schumacher (1988; as cited in Schoen and Hoover, 1990) proposed the following categories of problem behavior among “retarded offenders”:

1. poor coping responses which may result in an increased tendency, toward frustration and aggressive or revengeful behavior,
2. poor impulse control,
3. deficits in social skills, which may lead the offender to commit illegal acts to obtain attention or be liked,
4. tendency to acquiesce, which may lead to going along with the group,
5. lack of assertion skills, and
6. other adaptive deficits and poor discrimination skills.

Schilling and Schinke (1989) discuss the causation of sex offenses in developmentally disabled persons which includes:

1. sexual naïvety,
2. social isolation,
3. a preference for the company of younger children,

4. a history of delinquent behavior, and
5. other possible contributing factors such as lack of knowledge about sex, limited experience with socially desirable sexual conduct, and lack of opportunities to engage in adaptive adult sexual contact.

Murphy, Coleman, and Abel (1983) also propose sexual behavior is part of interpersonal behavior, and any focus on the sexuality of the developmentally disabled must also focus on relationships and the developmentally disabled individual's knowledge of such relationships. Although there has been much discussion regarding sex offenders' deficits in social skills, it is important to note that many persons who lack social skills do not commit sexual offenses. Thus, it appears as though there is more than just this factor in the etiology of sexual offending behavior in the developmentally disabled population.

A comprehensive model of sexually inappropriate behavior was suggested by Hinsburger, Griffiths, and Quinsey (1993) in which the term "counterfeit deviance" was used to describe behavior which appears sexually deviant, but may be the result of problems in the environment. This model appears to encompass the idea of social skills deficits and also takes into account the possibility of different "vulnerabilities". The etiology of this "deviant" behavior in a developmentally disabled individual is viewed as a function of "lack of information about sexual expression, a history of sexual victimization, poorly developed social skills, lack of assertiveness, limited opportunity for sanctioned relationships and medication side effects" (Demetral, 1993; p. 1). This model suggests the problem does not necessarily lie within the individual; rather, it is

located "at the transactional interface between the client and one or more systems in his or her environment (p.1)." For example, an individual may repeatedly engage in inappropriate touching of adult females. However, a careful, comprehensive assessment may reveal the individual only engaged in the behavior in the presence of other men who were taunting him. Additionally, the individual may not have access to consenting peer relations, may have never engaged in an appropriate sexual relationship, and may have been denied privacy to engage in masturbatory practice.

Examining whether the commission of a sexual offense is the result of sexually deviant behavior and fantasies or counterfeit deviance has very different implications for treatment. This will be discussed in more detail later. However, an examination of differences between different types of offenders (e.g., perpetrators against adult women and perpetrators against prepubescent children) can provide useful data to determine whether there are possible differences in etiology. If differences exist, they would necessitate different treatment approaches. One way to measure differences among offenders that has been used in the non-developmentally disabled population is to examine the variation of physiological arousal to stimuli that vary in content. Unlike the literature on non-developmentally disabled sex offenders, the literature regarding developmentally disabled sex offenders contains virtually no research investigating the differences in physiological arousal between perpetrators of adult sexual molestation and perpetrators of child sexual molestation. Schoen and Hoover (1990) state the challenges for research in the developmentally disabled population are to "discover whether subtle differences exist in patterns of characteristics between retarded and non-retarded offenders... and to validate existing instrumentation for use with this population."

Examining variations in arousal among classes of offenders using penile plethysmography would be a beginning to addressing this challenge. Furthermore, Hayes (1991) cautions that among developmentally disabled sex offenders, it is important to determine whether the inappropriate sexual behavior is the result of a deviant sexual response or whether it is due to the functional age of the individual, and thus, may be due to sexual curiosity. Again, this stresses the importance of determining whether sexual behavior is the result of deviant arousal or counterfeit deviance, which has implications for the type of treatment intervention provided.

Perpetrators of Adult Sexual Molestation versus Perpetrators of Child Molestation

In community samples, about one-in-four women report being the victim of rape or attempted rape (Russell, 1984; as cited in Drieschner & Lange, 1999). In view of the high prevalence rate, it is safe to conclude this is an enormous problem with serious consequences. Therefore, a greater understanding of the etiology is needed in order to reduce its incidence. This study will include all offenses sexual in nature against adult women, rather than only rape. For the purpose of this study, perpetration of adult sexual molestation is defined as the attempt or act of coercively engaging in any type of sexual behavior with another adult, which would include the act of rape.

Studies examining the etiology of sexual offenses committed against adult women have focused on a variety of domains such as deviant sexual arousal, affective factors, endocrinological and neurological anomalies, exposure to pornography, and deficits in social skills (Drieschner & Lange, 1999). Although these factors may contribute to the etiology of sexual offenses committed against adult women, none of them is sufficient.

As an example, deviant sexual arousal has been found to motivate only some perpetrators of sexual offenses committed against adult women. Additionally, some men who do not commit sexual offenses against adult women are also aroused by depictions of forced sex (Hall & Hirschman, 1993).

More recently, researchers studying the etiology of sexual offenses committed against adult women have been focused on the cognitive factors. Drieschner and Lange (1999) found that men “with a high proclivity to rape have more supportive rape attitudes, are more likely to consider victims to be responsible for rape, and are less knowledgeable about the negative impact of rape on the victims.” Additionally, these men exhibit poor ability in social skills, have more coercive fantasies, and view power as a precursor for sexual feelings.

This data has led to new suggestions on the treatment of men who commit sexual offenses against adult women. Such recommendations include interventions aimed at modifying rape supportive attitudes, training of social skills (specifically the ability to accurately interpret their misperceptions), consequences of the offense for the victim, separating violent from sexual fantasies, anger management, and cognitive modification of the parallel between sex and power (Drieschner & Lange, 1999).

As with sexual offenses committed against adult women, the consequences of child molestation are tremendous for the victims. Therefore, examining factors attributable to the cause are imperative in reducing the incidence. There are many different categories of child molesters (i.e., pedophiles, hebephiles, and gynephiles, etc.). Researchers have found there appear to be two different types of offenders against children: “fixated” and “regressed” offenders. Regressed offenders consist of individuals

for whom their main erotic attraction is for adults, despite having molested a child.

According to research, many incest offenders fit into this category (Studer, Aylwin, Clelland, Reddon, & Frenzel, 2002). Moreover, many researchers view incest offenders as a “unique subgroup” of offenders (Firestone et al., 1999). Therefore, because of the research findings that incest offenders are not primarily attracted to children, they will not be included in this study. For the purposes of this study, a child molester is described as an adult male who engages in inappropriate sexual behavior with a child 12 or younger and who is more than 5 years older than the victim. This will not include incest offenders, as the literature shows that they tend to be significantly different from non-familial child molesters (Travin, Bluestone, Coleman, Cullen, & Melella, 1985). The age of 12 is utilized here because of research examining the average age of pubescence. According to the tanner scales of development (Tanner, 1967), Stage 1 of development is prepubertal, stages 2 and 3 are intermediate, and stages 4 and 5 are pubertal. There is a body of literature that has found the sexual arousal for pubescent females may not indicate deviance due to their similarity of sexual maturity with adult females. Therefore, using a cut-off at Stage 4 appears indicated. The average age of attainment of Stage 4 is approximately 13. Consequently, age 12 will be the cut-off utilized to distinguish offenders against children. Perpetrators against adult women will include men who have engaged in sexually inappropriate behavior with a female age 18 or older.

Treatment of child molesters has frequently focused on changing the patient’s deviant arousal patterns to more socially appropriate ones and simultaneously teaching social skills in order to better relate with same age peers (Travin et al., 1985). As such, treatment includes components such as covert sensitization and masturbatory satiation,

sex education, social skills training, assertiveness training, and cognitive restructuring.

Treatment approaches used with non-developmentally disabled sex offenders have been adapted for use with developmentally disabled offenders (Cox-Lindenbaum & Lindenbaum, 1994; Griffiths et al., 1989; Haaven et al., 1990; Knopp, 1984; Lund, 1992; Swanson & Garwick, 1990). Most approaches include a group format with the use of cognitive-behavioral techniques that consist of peer confrontation, victim empathy, and construction of an offense map. Furthermore, many treat both child molesters and men who commit sexual offenses against adult women together and do not differentiate treatment based on their type of offense. However, the existence of deviant sexual arousal necessitates individual treatment that specifically addresses this problem. The existence of counterfeit deviance requires that modifications in the environment, which promote appropriate sexual expressions, be attained in order to decrease the need for sexually inappropriate expressions. In the example provided previously regarding the individual who engaged in inappropriate touching of adult females, working within the counterfeit deviance model suggests modifying the individual's environment by allowing one to engage in masturbation in privacy and training in social skills to promote the development of appropriate social relations. These techniques may be more appropriate treatment targets than working with deviant sexual arousal. Therefore, the appropriate assessment of deviant arousal needs to be employed, so that distinctions in treatment can be made.

Plethysmography and the Developmentally Disabled

The penile plethysmograph is designed to measure physiological changes in

penile tumescence during the presentation of sexual stimuli depicting a variety of sexual acts or objects of each gender at various ages. There is very little research using the plethysmograph with the developmentally disabled population. When searching in a database such as 'PsycInfo', a search with mental retardation or developmental disabilities and plethysmograph or phallometry produces no hits. However, there has been some, although very little, research using the plethysmograph with developmentally disabled sexual offenders. Unfortunately, there is a major fault in the current literature. Many researchers do not specify the IQs of the individuals they test. For example, the subjects in a research project may contain sexual offenders who are mildly developmentally disabled, borderline, and non-developmentally disabled (Brown, Stein, & Turk, 1995). It is unfortunate that many studies do not differentiate among the different levels of intellectual disability. Haaven and Schlank (2001) state that the plethysmograph is useful with this population. Additionally, Carapulo (1991) states that the plethysmograph can provide additional insight for evaluation of developmentally disabled sex offenders. However, both groups of researchers state there is little research in this area, especially when compared with the non-developmentally disabled population.

Murphy, Coleman, and Haynes (1983) experienced few problems while using the plethysmograph with a developmentally disabled population, although previous researchers have discussed potential problems in utilizing the plethysmograph with this population. Data has been provided which does not substantiate the problems associated with use of the plethysmography with persons with developmental disabilities. Some of the potential difficulties discussed include the developmentally disabled are less

responsive to visual stimuli, many are put on phenothiazines for their aggressive behavior which can interfere with arousal levels, and it is difficult to obtain accurate self-report of estimated arousal (Murphy, Coleman, and Haynes, 1983). However, the problem of the developmentally disabled being less responsive to visual stimuli has not been recorded in the literature and furthermore, in this study, they will have both visual and auditory stimuli. Obtaining information regarding which medications subjects were prescribed can control for the problem of medications interfering with arousal. Subjects can then be eliminated if they are on medications that significantly interfere with sexual arousal. The potential difficulty of obtaining accurate self-reported arousal can be overcome by using a number of more concrete descriptors. Additionally, it is extremely difficult to determine whether inaccurate reporting is a function of cognitive limitations or dishonesty.

Measuring Deviant Arousal

The plethysmograph has been in use for nearly 90 years. It was first used to check the effect of certain drugs on the vasomotor reflexes in dogs (Barker and Howell, 1992). Then the method was used to assess erectile difficulties. By 1957, Kurt Freund was using the plethysmographic method for measuring penile arousal (Barker & Howell, 1992). After utilizing breathing patterns, galvanic skin response, and heart rate, Dr. Freund determined volume change during penile arousal was the most accurate measure of erotic arousal. It is the only measure of sexual arousal that does not appear to be influenced by other factors (Barker & Howell, 1992).

With regard to arousal to deviant stimuli, the most accurate assessment of sexual

arousal is the plethysmography. The penile plethysmography provided the first objective measure of sexual arousal (Freund, 1991). Depending upon the apparatus, sexual arousal is measured either by volumetric changes associated with vasocongestive engorgement of the penis (Simon & Schouten, 1991) or changes in penile circumference. The method of measuring circumference has become the more popular method due to practical concerns such as ease of use. Actual measurement of penile circumference is measured by a mercury strain gauge or a Barlow gauge. Data is inconsistent as to which measurement is better, but the circumferential devices are less expensive, easier to use, and subsequently, more appropriate for research situations (Murphy & Barbaree, n.d.) Wheeler and Rubin (1987) concluded the volumetric measurement was more difficult, displayed more artifacts, and was not more sensitive than circumferential measures.

Laws (1977) compared the metal-band strain gauge (the Barlow gauge) with the mercury gauge with a single subject and found only slight differences which were negligible and not statistically significant. The metal-band strain gauge is easier to calibrate and easier for the clients to place. The mercury gauge is less expensive and less likely to slip off.

The stimuli used to assess sexually deviant behavior are one of the most important aspects of the plethysmographic procedure. The plethysmograph is able to differentiate individuals who manifest high levels of arousal to inappropriate sexual activity while exhibiting low levels of arousal to appropriate sexual stimuli. Auditory stimuli, visual stimuli, or a combination of both are used in the assessment of deviant arousal. Unfortunately, there are no standardized norms for the type or method of presentation of stimuli. Although research has shown video stimuli produce the highest arousal, audio

stimuli produce lower levels of arousal that are less likely to be influenced by suppression (Abel et al., 1975). Stimuli vary with respect to age and gender of the person presented, the amount of consent or violence, and the number of stimuli used.

There has and continues to be heated debate regarding the appropriateness of plethysmography in the assessment of deviant sexual arousal. Although many believe that plethysmography is an essential technology in the assessment of deviant sexual behavior, especially considering the difficulty in receiving accurate self-report data, it has its limitations. There are many non-standardized features that need to be more systematically employed. Additionally, the test is not resilient to faking or suppression of arousal. Despite these limitations, the plethysmograph is able to provide results that are essential in the assessment and treatment of sexual offenders.

Discriminative Properties of the Plethysmograph

Many studies have been done, on non-developmentally disabled populations, examining the discriminability of the plethysmograph for distinguishing between rapists and child-molesters, non-sexual offenders, and community volunteers. Earls (1983) states that one of the only reliable methods of discrimination between sexual offenders and non-offenders is their pattern of sexual preference as measured by their physiological arousal to sexual stimuli. The discriminant validity of the plethysmograph has been well established (Abel, Barlow, Blanchard, & Guild, 1977; Barbaree, Marshall, & Lanthier, 1979; Freund & Blanchard, 1989; Quinsey & Chaplin, 1988; Quinsey, Chaplin, & Upfold, 1984; and Quinsey, Chaplin, & Varney, 1981; Malcolm, Andrews and Quinsey, 1993 and Earls & Quinsey, 1985). Consequently, there is a lot of research that supports

the ability of the plethysmograph to discriminate among sexual offenders and against other offenders and community volunteers.

Whereas rapists cannot be differentiated from non rapists on the basis of intelligence, personality traits, hormonal levels, attitudes toward women, perceptions of aggression, use of pornography, the detection of inappropriate sexual cues, or heterosocial skills (Earls & Quinsey, 1985), many have found that they can be differentiated in their levels of arousal as measured by plethysmograph. The manner in which rapists respond to visual or auditory depictions of rape has been found to be different than “normals” (Abel, 1977; Barbaree, Marshall, & Lanthier, 1979; Quinsey & Chaplin, 1984; Quinsey, Chaplin, & Upfold, 1984; Quinsey, Chaplin, & Varney, 1981). For example, Quinsey, Chaplin, and Varney (1981) examined arousal patterns of rapists and non-sexual offenders to see if the plethysmograph was able to differentiate the two groups. Additionally, they examined a component of aggression within the vignettes to determine whether rapists become sexually aroused to physical aggression without the sexual component. Their results found rapists showed greater sexual arousal to rape vignettes than consenting vignettes as compared to the non-sexual offenders. However, rapists did not differ from the control group in their arousal to physical aggression without a sexual component.

In another study, conducted by Quinsey and Chaplin (1984), differences in arousal of rapists and non-sexual offenders were examined again, but this study included an examination of whether differences were confounded by victim response (i.e. pleasure or pain). Their results also supported a difference in arousal (calculated by a rape index) between non-rapists and rapists. However, there were no significant differences found in

their physiological responses to victim response within the stimuli.

Although many have found the plethysmograph to be discriminating, there are inconsistencies. With regard to rapists, more recent data has not revealed the ability of the plethysmograph to satisfactorily distinguish offenders from nonoffenders. Hall, Shondrick, and Hirshman (1993) have found that high rape arousal may not be discriminating between rapists from non-rapists. Furthermore, some men who are not sexually aggressive show an arousal to rape stimuli. In their meta-analysis of nine studies examining penile responsivity to rape stimuli, raw scores indicated that sexually aggressive men exhibited slightly more arousal to rape stimuli than did comparison or control subjects, but it was not significant. Furthermore, in a study completed by Howes (1998) comparing the arousal patterns of rapists and non-rapist offenders, no significant differences were found. However, he only used subjects who achieved full arousal.

On the other hand, studies have consistently shown the discriminability of the plethysmograph in differentiating child molesters from non-molesters in terms of their deviant sexual arousal to stimuli presenting children (Abel et al., 1981; Freund, 1967a; 1967b; Quinsey, Chaplin, & Carrigan, 1979). For example, in a study examining child molesters and “normals,” Quinsey and Chaplin (1988) found clear differentiation between the child molesters and normals in their arousal. Normals responded exclusively to vignettes with adult females, whereas child molesters responded more so to the vignettes depicting sex with children. Of interest is the fact that regardless of the gender of the victim, child molesters, on average, showed arousal to both genders. Furthermore, Freund and Watson (1991) found the specificity of the phallometric test of pedophilia and homosexual hebephilia as a confirmatory test to be satisfactory. However, the pedophiles

in this study had more than one victim.

Launay (1994) concludes that nearly all research studies comparing groups of pedophiles with controls have been successful in showing that non-familial pedophiles can be distinguished from controls by their penile response to pedophilic stimuli. However, there is controversy with regards to familial pedophiles. Marshall (1996) found that early studies quite consistently reported differences between familial and non-familial child molesters, with familial child molesters displaying deviant arousal to children and incest offenders appearing similar to non-offender males.

Sexual sadists have been differentiated from non-aggressive sex offenders, but non-sadistic rapists have produced mixed results. Early studies found rapists responded equally to rape and consenting sex stimuli (non-offenders responded more to consenting sex). However, this difference has since not been replicated. Furthermore, the use of different types of stimuli and procedures further complicates the data.

Wormith (1986) finds use of the plethysmograph discriminating, but not perfect. In his study investigating the differences in both physiological and self-report of sexual arousal between incarcerated rapists, pedophiles, and non-sex offenders, he found pedophiles responded significantly more to male children than non-sex offenders and significantly more than rapists to adult males. Rapists did not differ from non-sex offenders in any of the analyses and when two groups were collapsed (pedophiles and non-pedophiles), similar, but stronger results emerged. There was no reason to expect rapists to differ from non-sex offenders in their sexual preferences and the pedophiles were a mixed group in that their offense included homosexual, heterosexual, and bisexual pedophilia.

Looman and Marshall (2001) compared responses of child molesters and rapists on both auditory and visual stimuli and found significant differences between groups. Child molesters responded significantly less to adult females and more to adult males, pubescent males, and prepubescent males. Overall, rapists' indices indicated a preference for adults and child molesters' indices indicated a preference for non-adults.

Differences in findings of deviant arousal in rapists may be attributed to use of different stimuli (Lalumiere & Quinsey, 1993) or differences in samples of rapists (Marshall & Fernandez, 2000). Even though the plethysmograph appears to be the most reliable measure for differentiating sexual offenders, it has limitations. Some researchers believe the plethysmograph is better at evaluating sexual preferences of non-familial child molesters than other sexual offenders. Few incest offenders appear deviant and the evidence concerning rapists is inconsistent, although it seems that the sadistic offenders show clearly deviant interests (Marshall, 1999).

Based on the previous literature, it can be safely concluded that non-developmentally disabled child molesters differ significantly from rapists with regard to their deviant sexual arousal patterns. Subsequently, this has implications for different treatment approaches. Because current treatments for the developmentally disabled offender are often adapted from treatments for the non-developmentally disabled population, it is necessary to examine whether developmentally disabled rapists or perpetrators of adult sexual molestation differ from developmentally disabled child molesters, as this would also have implications for the type of treatment employed.

Differences in levels of deviant arousal are also important in terms of risk for re-offending. According to Hanson and Bussiere (1998), a meta-analysis was conducted in

which it was concluded that deviant sexual interest, specifically interest in children, was the single best predictor of sexual recidivism. Furthermore, research has revealed sexual recidivism was related to specific victim characteristics, such that individuals having a male victim, more than one victim, younger victims, and extrafamilial victims are more likely to have greater sexual interest in children.

Treatment Implications

It is readily agreed treatment decisions are based upon the results of a comprehensive assessment. A comprehensive assessment is one that combines information from a variety of sources using a variety of methods (i.e., multimodal). Results of the assessment may provide information to formulate a case conceptualization in which a theory of motivation for offending determines which specific interventions are chosen. The discriminative and predictive validity of sexual preferences implies a focus for treatment. Inappropriate sexual preferences are an important treatment target in many programs designed for sex offenders (Quinsey & Earls, 1990). Since some offenders display deviant arousal and since all of the offenders are prompted to act in a sexually deviant manner, it is necessary to implement procedures to reduce these tendencies whether or not they all appear (Marshall, Hudson, & Ward, 1992). One of the most critical aspects of sex offender treatment is the reliable and valid assessment and identification of deviant sexual arousal. Although offender self-report, offense history, and plethysmographic assessment can measure sexual preferences, the plethysmograph is the most valid technique for measuring deviant arousal (Harris & Rice, 1996; Harris, Rice, Quinsey, Chaplin, & Earls, 1992).

The plethysmograph permits clinicians to: identify individuals who manifest excessive arousal to stimuli depicting sexual abuse, spot lack of arousal to stimuli of consenting sex, note offenders whose arousal disorder necessitates specialized behavioral therapies, confront misrepresentations evident in self-reported levels of arousal, evaluate therapeutic efficacy, and enhance certain forms of behavioral therapy (Pithers and Law, 1989). It has been proposed that the arousal patterns of pedophiles resemble traits, whereas rapists' arousal patterns may be state dependent. Arousal patterns of rapists may be altered dramatically by different emotional and cognitive states and the abusive interests may emerge only after an activating event occurs. Consequently, the existence of different patterns of deviant arousal necessitates different types of treatment. For example, the treatment of rapists and child molesters has been found to differ in some respects in that treatment of rapists tends to focus more on cognitive distortions and anger.

Knight and Prentky (1990) have developed a taxonomic structure for classifying sexual offenders. They believe by employing a comprehensive assessment, one is able to better classify sex offenders and therefore, have more specific theories regarding the etiology and more specifically tailored interventions. The typology of rapists accounts for the heterogeneity in the population and supports the idea that sexual arousal and sexual motivation may differ among sub-types which would affect treatment (Boone Wills, 1993). Previous research has shown extensive heterogeneity of sex offenders; however, consistencies have been noted that can increase the homogeneity of certain taxonomies and inform clinical judgment. Therefore, assessment of deviant sexual arousal as it relates to the individual offender's behavior is important in specifying

treatment needs.

Marshall and Eccles (1991) state sex offenders fall into one of two possible categories in terms of allegations and admissions, but their responses can take on one of three possible forms. An individual may be accused of and admit to having offended sexually or be accused of a sexual offense but deny it. Response profiles can reveal deviant tendencies, reveal clear non-deviant tendencies, or produce such low levels of responding as to be uninterpretable. Implications for treatment are based on this reasoning – when an inappropriate stimulus is preferred or there is poor discrimination among stimulus categories, the inappropriate stimulus should be targeted for intervention. It is assumed that an offender acts in accord with his sexual preferences; however, he may be constrained due to moral scruples, opportunity, economic situation, and social resources. As such, one may choose a non-preferred sexual partner, which may be the next preferred category.

If researchers are not using assessment data that includes physiological arousal, they most likely are relying on means that have no established validity, such as offender self-report, to understand the interests of the client. The plethysmograph reliably measures deviant arousal, and this informs the clinician as to which behavioral techniques should be employed to lessen deviant arousal and strengthen appropriate arousal. Furthermore, continuous assessment using the plethysmograph throughout treatment is indicated so the effectiveness of treatment may be monitored.

Identifying deviant sexual interests in offenders is essential to providing the most effective treatment and reducing risk of re-offending. Although the existence of deviant arousal is not the only important variable among the etiology of sexual offending, it is an

indication that specific forms of therapy may need to be employed (Pithers & Laws, book). Most importantly, it is currently the only measure that differentiates offenders from non-offenders (Earls & Quinsey, 1985).

Although there are some significant differences between developmentally disabled offenders and non-developmentally disabled offenders, there are also many similarities. Little is known about the characteristics and likely response to treatment of developmentally disabled sex offenders (Day, 1997). Currently, much of the treatment utilized for developmentally disabled sex offenders was adapted from the treatment used for non-developmentally disabled sex offenders (Cox-Lindenbaum, 2001; Murphy, Coleman, & Haynes, 1983). In developing more effective treatments for developmentally disabled sex offenders, it is important to examine the variables that may differentiate developmentally disabled offenders and non-developmentally disabled offenders in terms of deviant arousal.

Hypotheses

Based on the literature, it may appear logical to conclude that developmentally disabled perpetrators of sexual offenses against adult women will resemble their non-developmentally disabled counterparts and developmentally disabled child molesters will resemble their non developmentally disabled counterparts with respect to deviant arousal. However, due to differences in overall offense patterns (i.e., developmentally disabled offenders have less victim specificity) and the theory of counterfeit deviance, I propose that developmentally disabled offenders will not resemble their non-developmentally disabled counterparts, but rather will show a general arousal to all stimuli, whether

deviant or not. Therefore, on measures of sexual arousal to various stimuli, I hypothesize there will not be a significant difference between the perpetrators against children and perpetrators against adult women on an age by group interaction.

CHAPTER 2: MATERIALS AND METHODS

Participants

Data was obtained from multiple sex offender treatment sites around the country. Sites included a civil commitment facility, four outpatient sex offender treatment centers, and two psychiatric hospitals. These facilities are located in the Minnesota; Nebraska; Iowa; Louisiana; Hawaii; Pennsylvania; and Prince Edward Island, Canada.

Individual IQ scores were not provided for each subject. However, all subjects were classified as low average/intellectually disabled. Because of their intellectual deficits, they were exposed to stimuli which were designed for use with developmentally disabled individuals. No information regarding Axis I or Axis II diagnoses was provided.

Screening Measures

Adult Pre-test Questionnaire. The Adult Pre-test Questionnaire is a questionnaire intended for use with individuals just prior to their plethysmographic assessment. It assesses whether any conditions exist that may impair the individual's ability to participate in the assessment (i.e., erectile dysfunction, medication, and vision problems). Additionally, it assesses preferred sexual partner, previous sexual offense, and victim history.

Apparatus

Each subject was seated in a chair located in a private room equipped with an intercom. Audio-visual stimuli were presented by television to the subject's testing area. The programming and recording equipment were located in a room adjacent to the participant's room. Penile circumference changes were measured using either a Barlowe

gauge or an Indium Gallium gauge that each subject fitted on the shaft of his penis. The leads from the gauge were connected to the Behavioral Technology Incorporated (BTI) Plethysmographic Instrument. The Barlow gauge was used more frequently, most likely due to the ease of application. However, due to problems such as obesity, some individuals used the Indium Gallium for more accurate measurement.

Additionally, each subject had two wires connected to two fingers to measure galvanic skin response (GSR) and a belt was placed around the chest to monitor respiration. Both of these apparatus are utilized in the detection of faking or suppression of sexual arousal.

Stimulus Materials

Subjects were presented 22 audio-visual stimuli in the second person by a male voice, one of which was utilized to determine baseline arousal and thus, not sexual in nature. The stimuli are specifically designed for a developmentally disabled population by Behavioral Technology Incorporated. It has been adapted for the comprehension level of developmentally disabled individuals such that the language has been simplified, there is less abstraction in the narration, and the narration is at a slower pace (Haaven & Schlank, 2001). The narrations include depictions of consenting or non-consenting sexual intercourse with a female or a male ranging in age from infant to adult. The auditory script is designed, “to tap into the self talk of the offender as he contemplates, past victims, selects a new victim, and rationalizes his behavior to himself” (BTI, 2000). The pictures are non-pornographic with individuals clothed in bathing suits, underwear, or regular clothes. During the stimuli presentation five still photographs of individuals who meet the age group and gender of the individual to be involved, were shown. The

stimuli were exactly 109 seconds in length. No nude pictures were shown. All offenders viewed the same stimuli; however, the order of the stimuli varied.

The effectiveness of the plethysmography to discriminate between pedophilic and gynephilic developmentally disabled sexual offenders against children has resulted in 100% sensitivity and 29% specificity that were increased to 89% after taking into account treatment effects (BTI, 2000). It appears as though the stimulus set offers a valid tool in the assessment of developmentally disabled sexual offenders. This is the only empirically studied set of stimuli specifically designed for use with this population.

Procedure

The data presented here are taken from the electronic databases maintained on the BTI Monarch Systems of the various institutions previously mentioned. Each participant signed a consent form after the procedure and apparatus were explained to him at the beginning of the testing session. The test session consisted of a presentation of 22 audio/visual stimuli presented in a fixed order. The stimuli were arranged in three unique sequences. Each participant viewed one of the three unique sequences of stimuli. Participants who did not comply with the testing procedures were not included in the data set.

Methods of Scoring

There are a variety of ways to measure erectile response magnitude. In general, three major methods for scoring have been suggested. The first and simplest method is to present data in terms of millimeters of circumference change from the flaccid state. However, penis circumferences at the flaccid state and at full erection differ markedly among individuals (Murphy & Barbaree, n.d.). A second method, percent full erection, is

an extension of the first. This change in circumference is converted to percent full erection. The third method involves expressing the data in terms of an ipsative z-score. Each subject's raw scores are treated as a distribution of all the presented stimuli. A mean and standard deviation are calculated and each score of the distribution is converted to z which represents each score as it differs from the mean (Murphy & Barbaree, n.d.). Earls, Quinsey, & Castonguay (1987) found that z-scores were more sensitive to differences in stimulus categories than raw score and percentage change indices. The z score method does not require an upper limit. However, a limitation of this measurement is that it fails to provide a measure of magnitude of the responses, which has to be reported separately (Launay, 1994).

A z-score was calculated for each participant in order to compare the groups of offenders in relation to their arousal to the stimuli. The differential score was then calculated. Arousal to inappropriate stimuli is subtracted by arousal to appropriate stimuli. For example, the Pedophilic Index is calculated as the average score for the adult categories (i.e., male and female, persuasive and coercive) minus the average of the child categories (i.e., preschool and grammar school age, male and female, persuasive and coercive). Using the standard scores to calculate the Pedophilic Index considers the individual differences in responsivity, and it is considered the most appropriate measure of pedophilic interests (Harris et al., 1992). Positive scores indicate a preference for adults whereas negative scores indicate a preference for children. It was predicted that there would not be a significant difference in any of the scores between the perpetrators of adult sexual molestation and perpetrators of child sexual molestation due to the low discriminability in victim selection and the possibility of counterfeit deviance that exists

among developmentally disabled sex offenders. According to previous research, an individual is considered a non-responder if they have not obtained a minimum change in circumference of 2.5 mm or 10% of full erection (Kuban, Barbaree, Blanchard, 1999). Furthermore, this research has indicated that at low levels of response (less than 2.5 mm), the circumferential measure is less accurate (Kuban, Barbaree, Blanchard, 1999). Therefore, non-responders, those having less than 2.5 mm change in circumference, are excluded.

CHAPTER 3: RESULTS

Statistical Analyses

The original plethysmographic data set contained 106 subjects. However, 8 subjects were eliminated due to missing demographic information. Of the remaining 98 subjects, 9 were missing the age of the victim, and 32 had victims in both the child and adult age groups, leaving 57 subjects. Of the 57 subjects, 11 had committed incest with a daughter or stepdaughter, and thus, were excluded from this study. Four more subjects were excluded because their intellectual functioning was too high. The final number of subjects in this study was 42. These men ranged in age from 19 years to 59 years with a mean age of 37. These individuals varied in the number of victims, ranging from 1 to 30 with a mean of 5 victims. The majority of subjects, 62%, were from four different outpatient sex offender treatment centers, 24% were from two different psychiatric hospitals, and 6% were from a civil commitment facility.

The group of men with developmental disabilities who committed sexual offenses against adult women consisted of 20 men. The group of men with developmental disabilities who committed sexual offenses against prepubertal children consisted of 22 men.

Analyses of variance (ANOVAs), were performed to determine whether differences existed between the two groups of offenders with regard to their age, education (e.g., highest grade completed in school), and number of victims. The two groups did not differ significantly with respect to age, $p = .061$, $F(1, 40) = 3.708$. The average age of the offenders against children was 33.5 with a standard deviation of 10.4

and the average age of offenders against adults was 39.9 with a standard deviation of 10.9. Although educational data was missing for two of the subjects, analyses performed indicated there was not a significant difference in level of schooling completed between the two groups, $p = .128$, $F(1, 39) = 2.421$. Offenders against children completed an average of 9 years of education, whereas offenders against adults completed an average of 10.5 years of education. It is not known whether any of the offenders were enrolled in special education classes. The two groups did not differ with respect to number of victims, $p = .132$, $F(1, 40) = 2.359$. The number of victims for the child offenders ranged from 1- 20 with a mean of 4.4 and standard deviation of 4.5. The number of victims for the adult offenders ranged from 1-18 victims with a mean of 3.6 and standard deviation of 4.9. In examining whether the two groups differed in terms of having a single versus multiple victims, offenders against children had an average of 1.7727 victims and offenders against adults had an average of 1.550 victims.

Table 1: Summary of Data for Child Molesters

(N = 22)	Range	Mean	
Age Range of Participants	20 – 50	33.5	
Years of Education of Participants	0 – 12	9	
Number of Victims	1 – 20	4.4	
(5 had only 1 victim)			
	Male	Female	Both
Gender of Victim	3	9	10

Table 2: Summary of Data for Perpetrators Against Adult Females

N = 2			
	Range	Mean	
Age Range of Participants	19 – 59	39.9	
Years of Education of Participants	05 – 18	10.5	
Number of Victims	1 – 18	3.6	
(9 had only 1 victim)			
	Male	Female	Both

Data was not available regarding how the individuals were classified as having mental retardation. For example, it is unknown whether the diagnosis of mental retardation was based on intellectual testing and deficits in adaptive behavior. Additionally, the manner in which the participants are classified as sexual offenders is also unknown. Data regarding whether the individuals were arrested, suspected, or convicted of a sexual offense was not provided. Furthermore, the method for determining the number of victims is also unknown. Whether the information is based on self-report or arrest history has considerable implications. Another area in which the data was incomplete related to the number of participants who were found incompetent to continue with legal proceedings. Further collection of data on the subjects was attempted but could not be collected.

The Pedophile Index is the average of all preschool and grammar school stimuli subtracted from the average of all adult stimuli. An analysis of variance (ANOVA) was performed to determine if significant differences exist between adult perpetrators and child molesters. Positive scores indicate a preference for adults, whereas negative scores indicate a preference for children. The group of offenders against children had scores that ranged from $-.77547$ to $.86022$ with a mean of $-.0711226$ and a standard deviation of $.484$. In this sample, 55% of the child molesters obtained scores indicating a preference for children. The group of offenders against adult women had scores that ranged from $-.51929$ to 1.11702 with a mean of $.1035328$ and a standard deviation of $.358$. In this sample, 30% of the sample had scores indicating a preference for children. However, significant differences did not exist between the two groups, $p = .195$, $F(1, 40) = 1.737$.

A split plot repeated measures design was conducted to examine whether differences exist between offenders against children (child molesters) versus those who offended against adults (perpetrators of adult sexual molestation) to examine between x within subjects interactions, including a hypothesized nonsignificant group x age interaction. The group x age interaction is predicted to demonstrate that the offenders against adults and the offenders against children respond similarly to all groups of stimuli with regard to age (preschool, grammar, teenage, and adult) using the z-scores of the maximum peak arousal. The four age groups of sexual narratives represent the dependent variables, in addition to gender (male and female) and type of manipulation (persuasive versus coercive), and the sexual offender group represents the independent variable resulting in a 4 x 2 x 2 design.

Table 3: Mean Z-score of Maximum Peak Arousal for the Three Groups at Varying Levels of Stimulus Materials Age, Gender, and Manipulation

Age	Gender	Manip	Adult Perpetrators	Child Perpetrators
Preschool	Male	Coercive	-.387	.127
		Persuasive	-.163	.038
	Female	Coercive	-.019	.009
		Persuasive	-.268	.176
Grammar	Male	Coercive	.120	-.172
		Persuasive	.028	-.049
	Female	Coercive	.064	-.154
		Persuasive	-.078	-.010
Teen	Male	Coercive	-.241	.139
		Persuasive	-.273	-.041
	Female	Coercive	.191	-.103
		Persuasive	.039	.033
Adult	Male	Coercive	.160	-.263
		Persuasive	.059	-.068
	Female	Coercive	.109	-.078
		Persuasive	-.265	.108

Mauchly's Test of Sphericity was used to examine the data for violations of the assumption that the variance covariance matrix was circular in form. If the significance of Mauchly's test is small, sphericity can not be assumed and a correction to the degrees of freedom is necessary. The results in Table 4 indicate sphericity can not be assumed, thereby necessitating an adjustment to the degrees of freedom. As a result, the Huynh Feldt correction was utilized on the degrees of freedom based on the level of conservativeness employed. Inspection of the between x within subjects interaction revealed a significant age by group interaction was found, $p = .010$, $F(3) = 3.921$, and a second significant interaction was found, $p = .016$, $F(2.845) = 3.690$ with respect to age by gender by group.

Table 4: Tests of Within Subjects Effects

	df	Mean Square	F	Significance	Power
Gender	1	.325	.096	.754	.061
Gender * Group	1	.017	.005	.943	.051
Age	3	.042	.105	.957	.069
Age * Group	3	1.573	3.921	.010	.819
Manip	1	.025	.050	.825	.055
Manip * Group	1	1.606	3.154	.083	.411
Gender * Age	2.845	.238	.677	.561	.185
Gender * Age * Group	2.845	1.296	3.690	.016	.776
Gender * Manip	1	.089	.161	.690	.068
Gender * Manip * Group	1	1.548	2.810	.102	.373
Age * Manip	3	.035	.064	.979	.061
Age * Manip * Group	3	.343	.636	.593	.180
Gender * Age * Manip	2.219	.141	.194	.845	.081
Gender*Age*Manip*Group	2.219	.283	.390	.700	.114

Examination of the plot of the age by group interaction (see Figure 1) reveals offenders against children were considerably more aroused than offenders against adults to the preschool stimuli. However, the offenders against adults revealed a higher level of arousal for the grammar school than the offenders against children. In consideration of

the teen stimuli, the offenders against children again revealed a higher level of arousal than the offenders against adults and with the adult stimuli the offenders against adults revealed a higher level of arousal than the offenders against children. With regard to gender, the offenders against children appeared to have higher levels of arousal for both males and females; however, a larger difference between the two offender groups occurred for the males.

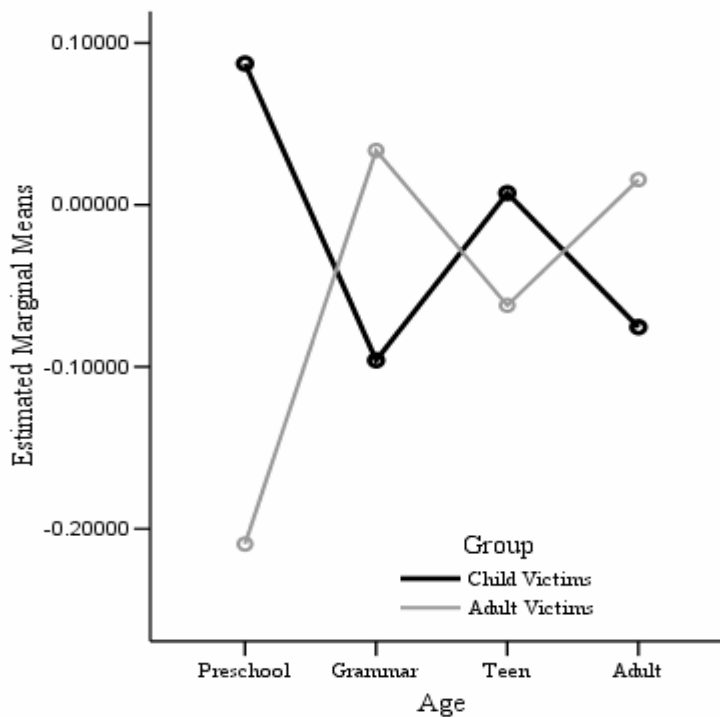


Figure 1: Age * Group Interaction

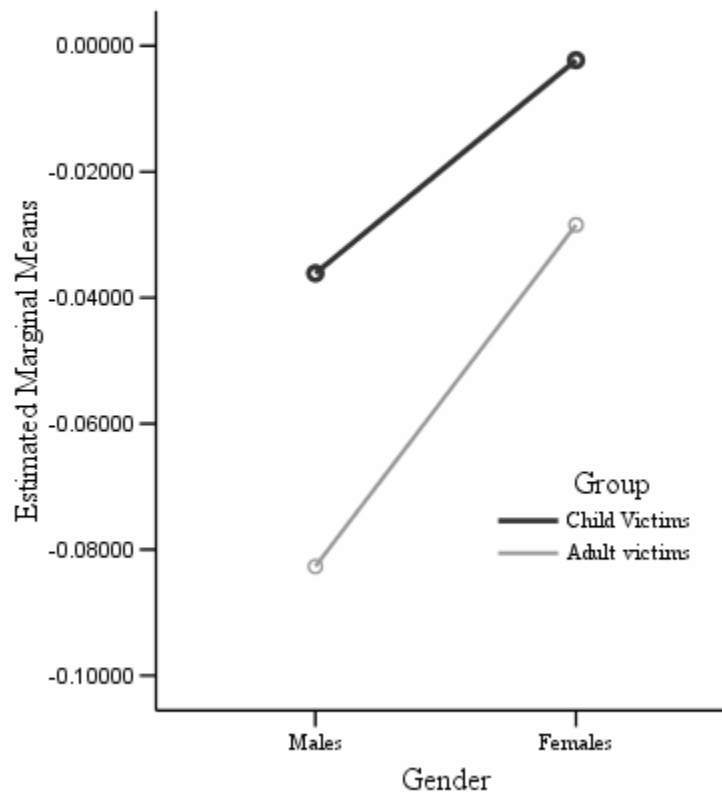


Figure 2: Gender * Group Plot

Therefore, it appears the group differences in age of stimuli are mediated by gender. Furthermore, examination of the data reveal the power associated with the age by group interaction and the age by gender by group interaction is .819 and .776, respectively. This is a relatively acceptable level of power to find significant effects; however, the level of power for the other within-subject effects are considerably lower ranging from .051 to .411, making it extremely difficult to find a significant difference if one exists.

Due to the confounding result of the mediating variable of gender, post hoc tests were conducted to examine the influence of gender. As previously stated, child offenders with a specific sexual offense history including male victims are at higher risk for re-offense. Two risk assessment instruments which take gender into account include the Screening Scale for Pedophilic Interests (SSPI; Seto & Lalumiere, 2001) and the Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR; Hanson, 1997). Both instruments consider the relationship of the victim to the offender. The SSPI also includes the number of victims and the age whereas the RRASOR includes the offender's age and prior sex offenses. Each assessment tool contains four variables (see Tables 5 and 6). The items for the SSPI and the RRASOR were scored from the information contained in the AIS file, which included the subjects' sexual offense histories. Each item was coded as either present or absent. Table 7 shows the distribution of scores for both measures. SSPI and RRASOR scores were calculated for every subject in the original data pool, except those with IQs that were too high and those with missing information, in order to increase the power of the statistical analyses. Of the remaining 80 subjects, 27 had only child victims, 22 had only adult victims, and 31 had victims in multiple age groups, including teen victims. One would predict a correlation associated with SSPI and RRASOR with the Pedophilic Index score as evidenced in previous research. Thus, those with more deviant sexual interests (e.g., a more negative Pedophile Index score) would have higher SSPI and RRASOR scores, resulting in a negative correlation. Research has shown that child molesters scoring high on the SSPI and RRASOR are more likely to have a more deviant score on the pedophilic index (Seto & Lalumiere, 2001). Additionally, scores on both the SSPI and RRASOR have been found

to correlate with the Pedophile Index with regard to child molesters. However, a correlation coefficient was calculated with those subjects having a Pedophile Index score of less than zero on the SSPI and RRASOR. The correlation for the SSPI and the Pedophile Index was $r(45) = -.150, p = .326$ and the correlation for the RRASOR with the Pedophile Index was $r(45) = -.058, p = .705$. Neither of these correlations were significant.

Table 5: Screening Scale for Pedophilic Interests (SSPI).

Any male victim	2
More than one victim	1
A victim under the age of 11	1
Any extrafamilial victims	1

Table 6: The Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR).

Prior sex offenses (not including index offenses)	
none	0
1 conviction; 1-2 charges	1
2-3 convictions; 3-5 charges	2
4 or more convictions; 6 or more charges	3
Age at release (current age)	
more than 25	0
less than 25	1
Victim Gender	
only females	0
any males	1
Relationship to victim	
only related	0
any non-related	1

Table 7: Descriptive Statistics for SSPI and RRASOR

	SSPI	RRASOR
Mean	3.1375	1.7875
Std. Deviation	1.6362	.9372
Range	0-5	0-4
Frequencies of scores		
0	2	5
1	17	29
2	12	25
3	12	20
4	11	1
5	26	0

SSPI and RRASOR scores were also compared between the two offender groups. For the group of offenders against children (N= 22), the scores on the SSPI ranged from 1 to 5, with an average of 3.2273 and the scores RRASOR ranged from 0 – 3 with a mean of 1.7727. For the group of offenders against adult women (N= 20), the score on the SSPI ranged from 0 – 4 with a mean of 1.5000, and the scores on the RRASOR ranged from 0 – 3 with a mean of 1.2500. Results from an ANOVA indicate the offenders against children had significantly higher SSPI scores [$p = .000$, $F(1, 40) = 17.643$] than the offenders against adult women, but they did not reach significance with regard to scores on the RRASOR [$p = .064$, $F(1, 40) = 3.622$]. This lack of significance may have

been due to the low number of subjects or the unreliability of calculation of RRASOR scores based on the information provided in the AIS. Please see Table 8 for a summary of the data.

Table 8: SSPI and RRASOR Scores for Offender Groups

	SSPI		RRASOR	
	Range	Mean	Range	Mean
Child Molesters (22)	1-5	3.2273	0-3	1.7727
Adult Perpetrators (20)	0-4	1.500	0-3	1.2500

CHAPTER 4: DISCUSSION

The results of the present study suggest that certain differences may exist between developmentally disabled offenders against adult women and developmentally disabled offenders against children with regard to deviant arousal, which is in opposition to the hypothesis proposed. However, the offenders against children were not more deviant in their age preferences as measured by the Pedophile Index. There were significant differences between the two group's arousal patterns as evidenced by the significant interactions (i.e., age by group, and age by group by gender). These differences are not solely attributable to the age of the stimulus presentation, but appear to be influenced by the gender as well.

The significant interactions found were unexpected and rarely encountered in research. Even though differences were found between the two groups with regard to victim preferences, more differences may have been observed had there been adequate power. For the two interactions that were significant, the level of power was acceptable [using a standard of .80 as suggested by (Cohen & Cohen, 1983)]. The remaining data had unacceptably low power, as low as .051, substantially decreasing the probability of finding a difference if one really exists. Group construction was critical in obtaining a homogeneous sample and thus affected the power of the design. Many of the subjects had to be discarded due to inclusion and exclusion criteria. The majority of subjects were discarded because they had teenage victims or because they had victims from both the adult and child age groups.

There are a variety of possible explanations for the significant interactions. First,

due to lack of information about the participants, numerous hypotheses can be suggested which could potentially impact the interactions. For example, within and between groups differences in IQ may have contributed to the significant interaction. Those with a higher developmental level may be better able to differentiate between age groups and show greater discrimination between stimuli than those more developmentally delayed. Furthermore, individuals may tend to be more aroused by stimuli that appear to be similar in developmental age or for those with whom they identify. As such, those with higher IQs may tend to be more attracted to individuals closer to their age.

Lack of information about the way in which the offenders were classified as adult or child perpetrators is problematic. The differences in victims between the two groups may not be as significant as it appears. Often, sexual offenders have more victims than they admit to or for which they are convicted. Thus, it may be that many of the participants have victims in both categories or of varying age ranges.

The possibility exists that there is a problem with the stimuli used in this study. The specificity of the PPG for this age level may be inadequate. As a result, such differences may not actually exist. Additionally, due to the lack of information about the participants, it is difficult to assess whether these results are an unexpected artifact of the data.

Finally, due to the exclusion and inclusion criteria used in this research study, the generalizability of the population may be significantly limited such that it does not represent other populations of mentally retarded sexual offenders previously studied. These results may be specific to this group of offenders.

According to research, sexual interest in children as measured by the phallometry

is associated with having male victims, multiple victims, younger victims, and extrafamilial victims (Freund & Blanchard, 1989; Freund & Watson, 1991, Seto et al., 1999). Based on this information, the findings of an age by group and age by group by gender interactions appear valid. Age by itself is not a sufficient discriminating variable among developmentally disabled offenders against adult women with offenders against children.

Upon finding the influence of gender with regard to differences between the two groups, further examination of the data was undertaken and post hoc analyses conducted. Subsequently, SSPI and RRASOR scores were calculated and correlated with the Pedophile Index. Unlike what other research has found, a significant correlation was not obtained with individuals scoring less than zero on the Pedophile Index. There are many possible hypotheses as to why this may have occurred. Due to the lack of information on IQ, it is impossible to determine whether there is a difference as a result of differences in IQ scores. Blanchard et al., (1999) reported low intellectual functioning among child molesters made a small, but statistically significant, contribution to the prediction of pedophilic interests.

The present study discovered differences in the arousal patterns of developmentally disabled offenders against adult women and developmentally disabled offenders against children. However, several limitations of the current investigation must be addressed. First, the sample size of the present study was quite small, reducing the power of the statistical analyses. More significant differences may have been observed had there been a greater power. Thus, further replication is necessary. In the event that

future studies replicate current findings, then further exploration of the role of gender should also be examined rather than focusing entirely on age.

Second, the diagnosis of mental retardation were made at the sites at which the data was obtained. Therefore, the validity of the diagnoses in the present study may be under question. Additionally, the lack of actual IQ scores is a significant limitation. No determination could be made on the basis of IQ as to whether the two groups differed; however, the level of education of the offenders did not significantly differ. The level of variability within groups could also not be determined. Similarly, the present study gathered pre-administered plethysmographic evaluations. Qualified personnel administered each of the assessments; however, it is difficult to determine the source of the information utilized in the AIS section, which included offense history. Offenders often do not provide accurate information about their offense histories. The present study may have been more valid if the information had been collected from collateral sources. The calculations of the RRASOR and SSPI scores were dependent upon the information in the AIS section. The accuracy of the RRASOR score is questionable as it was difficult to determine from the AIS information the number of convictions and/or charges an individual experienced, so a more conservative score was applied.

Finally, careful selection was made to ensure the homogeneousness of the two offender groups. Subjects were excluded if they had a teenage victim or had victims in more than one age group (child, teen, or adult). However, many offenders often have victims that have never been reported. Therefore, it is difficult to determine the true homogeneity of the sample. Additionally, this sample may not be generalizability due to the strict inclusion and exclusion criteria used.

In conclusion, differences were observed in the deviant arousal of developmentally disabled offenders against adult women and developmentally disabled offenders against children. It was proposed that no differences would be observed due to lack of discriminability of victim selection and counterfeit deviance. It appears as though developmentally disabled sexual offenders may closely resemble their non-developmentally disabled counterparts and, as a result, treatments adapted for the developmentally disabled population may be appropriate. However, there is a need for further research to support the present findings due to the unique significant interactions. The difference in SSPI scores among the groups of offenders is very important in terms of risk for re-offending. Although differences were observed in the deviant arousal, it appears as though gender, rather than age, may be a more appropriate variable to consider, as evidenced by the lack of significance in differences in the Pedophile Index and significance found in the interactions of the various stimuli and differences between the two groups with respect to SSPI scores.

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